VOX SANGUINIS

Journal of Blood Transfusion, Immunohaematology and Immunopathology

ADVISORY BOARD

P. H. Andresen, Copenhagen (Denmark)
W. Dameshek, New York N.Y. (USA)
L. K. Diamond, San Francisco, Calif. (USA)
S. T. Gibson, Washington, D. C. (USA)
T. J. Greenwalt, Washington, D.C. (USA)
Ph. Levine, Raritan, N.J. (USA)
W. d'A. Maycock, London (Gr. Britain)
G. W. Miller, Toronto (Canada)
P. Moreau, Liège (Belgium)
T. Ogata, Tokyo (Japan)
M. Shapiro, Johannesburg (South Africa)
R. J. Walsh, Sydney (Australia)

representing the International Society of Blood Transfusion: J. P. Soulier, Paris
representing the League of Red Cross Societies: Z. S. Hantchef, Geneva

CONTRIBUTING EDITORS

H. D. Anderson, Lansing, Mich. (USA)
R. Bütler, Bern (Switzerland)
H. Chaplin, St. Louis, Mo. (USA)
B. Chown, Winnipeg, Man. (Canada)
R. R. A. Coombs, Cambridge (Gr. Britain)
Marie Cutbush Crookston, Toronto, Ont. (Canada)
J. Dausset, Paris (France)
A. Eyquem, Paris (France)
E. Freiesleben, Copenhagen (Denmark)
H. Fudenberg, San Francisco, Calif. (USA)
K. L. G. Goldsmith, London (Gr. Britain)
M. Harboe, Oslo (Norway)
C. F. Högman, Uppsala (Sweden)
J. R. Krevans, Baltimore, Md. (USA)
H. W Krijnen, Amsterdam (Netherlands)
H. G. Kunkel, New York, N.Y. (USA)
P. Lalezari, New York, N.Y. (USA)
S. D. Lawler, London (Gr. Britain)
S. P. Masouredis, Milwaukee, Wis. (USA)
M. Metaxas, Zürich (Switzerland)
F. Milgrom, Buffalo, N.Y. (USA)
J. F. Mohn, Buffalo, N.Y. (USA)
P. L. Mollison, London (Gr. Britain)
A. E. Mourant, London (Gr. Britain)
E. Neter, Buffalo, N.Y. (USA)
H. Nitschmann, Bern (Switzerland)
R. R. Race, London (Gr. Britain)
I. M. Roitt, London (Gr. Britain)
J. J. van Rood, Leyden (Netherlands)
C. Ropartz, Rouen (France)
R. E. Rosenfield, New York, N.Y. (USA)
H. Schubothe, Freiburg i. Br. (Germany)
A. G. Steinberg, Cleveland, Ohio (USA)
F. Stratton, Manchester (Gr. Britain)
S. N. Swisher, Rochester, N.Y. (USA)
G. H. Tovey, Bristol (Gr. Britain)
Z. Trnka, Geneva (Switzerland)
J. L. Tullis, Boston, Mass. (USA)
G. Uhlenbruck, Köln-Lindenthal (Germany)
R. L. Walford, Los Angeles, Calif. (USA)

EDITORS OF BRIEF REPORTS

North and South America:
E. Giblett, Seattle, Wash. (USA)

Europe:
A. Hässig, Bern (Switzerland)

EDITORS-IN-CHIEF

North and South America:
F. H. Allen, New York, N.Y. (USA)

Europe:
L. Holländer, Basel (Switzerland)

CHAIRMAN

J. J. van Loghem, Amsterdam (The Netherlands)

1969 (19th Year) — Vol. 16 (New Series)

BASEL (Switzerland) — S. KARGER — NEW YORK

Official Journal of the International Society of Blood Transfusion

S. Karger AG, Arnold-Böcklin-Strasse 25, 4000 Basel 11 (Switzerland)

All rights, including that of translation into other languages, reserved.
Photomechanic reproduction (photocopy, microcopy) of this volume or parts thereof
without special permission of the publishers is prohibited.

©

Copyright 1969 by S. Karger AG, Basel
Printed in Switzerland by Buchdruckerei Friedrich Reinhardt AG, Basel

INDEX

Ablin, R. J.; Milgrom, F.; Kano, K.; Rapaport, F. T. and Beutner, E. H.:
Pemphigus-Like Antibodies in Patients with Skin Burns 73

Adebahr, Margot E.:
vide Allen, F. H., Jr.

Allen, F. H., Jr.; Issitt, P. D.; Degnan, T. J.; Jackson, Valerie A.; Reihart, Judith K.; Knowlin, R. J. and Adebahr, Margot E.:
Further Observations on the Matuhais-Ogata Phenomenon 47

Allen, F. H., Jr. vide German, J. L.

Allen, F. H., Jr.: vide Puno, C. S.

Angela, Frances: vide Sgouris, J. T.

Baribeau, G.: vide Pretty, H. M.

Beranová, Gerda; Prodanov, P.; Hrubiško, M. and Šmálik, S.:
A New Variant in the ABO Blood Group System: B_h 449

Beutner, E. H.: vide Ablin, R. J.

Borst-Eilers, E.: vide Dudok, C. de Wit

Breekveldt-Kielich, J. C.:
vide Rümke, Ph.

Bucher, U.; Graffenried, B. v.; Mühlenen, A. v.; Kummer, H. and Roggen, G.:
Partly Deplasmatised Blood: A Possibility of Saving Blood on a National Scale 228

Capra, J. D.; Dowling, P.; Cook, S. and Kunkel, H. G.:
An Incomplete Cold-Reactive γG Antibody with i Specificity in Infectious Mononucleosis 10

Chalmers, D. G.: vide Culley, G. A.

Cohen, Flossie; Warezak, Wanda and Zuelzer, W. W.:
Interrelationship of Erythrocyte Blood Group Substances A, B, and H Studied with Immunofluorescence 105

Cook, S.: vide Capra, J. D.

Culley, G. A. and Chalmers, D. G.:
Direct Antiglobulin Consumption Test: Tests on Leucocytes and Platelets from Patients with Malignant Disease and some Observations on Quantitation 183

Curtain, C. C.: Anti-I Agglutinins in Non-Human Sera 161

Dahr, P.: vide Rittner, Ch.

Degnan, T. J.: vide Allen, F. H., Jr.

Douglas, S. D. and Fudenberg, H. H.:
Graft Versus Host Reaction in Wiskott-Aldrich Syndrome: Antemortem Diagnosis of Human GVH in an Immunologic Deficiency Disease 172

Dowling, P.: vide Capra, J. D.

Dudok, C. de Wit and Borst-Eilers, E.:
Lack of Relationship Between the Response to the D-Antigen and to some Other Antigens 222

Elves, M. W.: The Mixed Leucocyte Reaction: Studies Using Leucocytes from Unrelated Human Subjects 81

Engelfriet, C. P.: vide Overweg, J.

Feingold, Elaine: vide Shepherd, L. P.
Fiset, Denise: vide Pretty, H. M.
Fudenberg, H. H.: vide Douglas, S. D.
Fudenberg, H. H.: vide Gold, E.
Fudenberg, H. H.: vide Vyas, G. N.
Furuhjelm, U.; Nevanlinna, H. R.; Nurkka, Riitta; Gavin, June and Sanger, Ruth: Evidence that the Antigen Ul^a is Controlled from the Kell Complex Locus 496
Gavin, June: vide Furuhjelm, U.
German, J. L.; Walker, M. E.; Stiefel, F. H. and Allen, F. H., Jr.: Autoradiografic Studies of Human Chromosomes. II. Data Concerning the Position of the *MN* Locus 130
Giblett, Eloise R.: vide Saison, Ruth
Gold, E. R. and Fudenberg, H. H.: Simultaneous Agglutination Tests with Human Antiglobulins . . . 57
Gold, E. R. and Thompson, T. E.: Serological Differences Between Related Species of Snails. I. Revealed by Reverse Passive Agglutination Tests 63
Gold, E. R. and Thompson, T. E.: Serological Differences Between Related Species of Snails. II. Revealed by Haemolysis Tests, Agglutination Tests with Tumour Cells and Content of B-like Substance 119
Golde, D. W.; McGinnis, M. H. and Holland, P. V.: Mechanism of the Albumin Agglutination Phenomenon 465
Gooch, Ann: vide Schneider, W.
Gottshall, R. Y.: vide Sgouris, J. T.
Graffenried, B. v.: vide Bucher, U.
Guévin, R.: vide Pretty, H. M.
Gundersen, Sidsel K.: A Specific Concentration Procedure for Human Haemagglutinin . . 237
Hakomori, Sen-itiroh: Differential Reactivities of Fetal and Adult Human Erythrocytes to Antisera Directed Against Glycolipids of Human Erythrocytes . . . 478
Hirschfeld, J. and Rittner, Ch.: Inheritance of the Ag(x), Ag(y), (a_1) and Ag(z) Antigens 146
Holland, P. V.: vide Golde, D. W.
Hopkins, D. F.: Saline Anti-Rh(D) and Haemolytic Disease of the Newborn 32
Hopkins, D. F.: Rhesus Phenotypes and Rh(D) Haemolytic Disease of the Newborn 195
Howell, P.: vide Smith, D. S.
Hrubiško, M.: vide Beranová, Gerda
Issitt, P. D.: vide Allen, F. H., Jr.
Jackson, Valerie A.: vide Allen, F. H., Jr.
Jenkins, D. E., Jr.: vide Luthringer, D. G.
Kano, K.: vide Ablin, R. J.
Knowlin, R. J.: vide Allen, F. H., Jr.

KORNSTAD, L.: Anti-Le^b in the Serum of Le(a+b–) and Le(a–b–) Persons: Absorption Studies with Erythrocytes of Different ABO and Lewis Phenotypes 124
KUMMER, H.: vide BUCHER, U.
KUNKEL, H. G.: vide CAPRA, J. D.
LARSEN, B. and TÖNDER, O.: Preparation of Anti-Human-γ-Globulin Sera not Containing Human Serum Proteins 69
LEE-POTTER, J. P.: Haemagglutinins in Water Snails 500
LOWES, B. C. R.: Hemolytic Disease of the Newborn Due to Anti-Rh14 (Rh^H) 231
LOZA, ULANA: vide MILGROM, F.
LUTHRINGER, D. G.; JENKINS, D. E., Jr. and WALLIS, LILA A.: Autoimmune Hemolytic Anemia with Hemoglobinemia and Hemoglobinuria in the Absence of a Demonstrable Hemolysin or Complement-Binding Antibody 18
MASURE, R.: Human Factor VIII Prepared by Cryoprecipitation 1
MCGINNIS, M. H.: vide GOLDE, D. W.
MILGROM, F.: vide ABLIN, R. J.
MILGROM, F. and LOZA, ULANA: Immunodiffusion Tests with Rh Antigens and Antibodies 470
MONN, E.: Application of the Phosphoglucomutase (PGM) System of Human Red Cells in Paternity Cases 211
MÜHLENEN, A. v.: vide BUCHER, U.
NEVANLINNA, H. R.: vide FURUHJELM, U.
NURKKA, RIITTA: vide FURUHJELM, U.
OVERWEG, J. and ENGELFRIET, C. P.: Cytotoxic Leucocyte Iso-Antibodies Formed During the First Pregnancy 97
PEMBERTON, R. T.: Studies on the Human Red Cell Agglutinins of the Swan Mussel (*Anodonta cygnea*) 457
PEMBERTON, R. T.: Incomplete Antibodies for A_1 Red Cells in Extracts of the Molluscs *Bithynia tentaculata* and *Pomatias elegans* 503
PORTWOOD, LUCILE: vide SGOURIS, J. T.
PRETTY, H. M.; TALIANO, V.; FISET, DENISE; BARIBEAU, G. and GUÉVIN, R.: Another Example of Lewis Negative Bombay Bloods 179
PRODANOV, P.: vide BERANOVÁ, GERDA
PUNO, C. S. and ALLEN, F. H., Jr.: Anti-s Produced in Rabbits 155
RAPAPORT, F. T.: vide ABLIN, R. J.
REIHART, JUDITH K.: vide ALLEN, F. H., Jr.
RICHES, R.: vide SMITH, D. S.
RITTNER, CH. and DAHR, P.: Gc Norway (Gc1C): A Second Mother-Child Combination 510
RITTNER, CH.: vide HIRSCHFELD, J.
ROELCKE, D.: A New Serological Specificity in Cold Antibodies of High Titre: Anti-HD 76

Roggen, G.: vide Bucher, U.
Rümke, Ph. and Breekveldt-Kielich, J. C.:
How to Enhance the Sensitivity of the Radial Single Diffusion Technique for the Quantitation of Antigens 486
Saison, Ruth and Giblett, Eloise R.:
6-Phosphogluconic Dehydrogenase Polymorphism in the Pig 515
Sanger, Ruth: vide Furuhjelm, U.
Schneider, W.; Tippett, Patricia and Gooch, Ann:
The Antigen P^k in a German Family 67
Sgouris, J. T.; Volk, V. K.; Angela, Frances; Portwood, Lucile and Gottshall, R. Y.: Studies on Diphtheria Immune Globulin Prepared from Outdated Human Blood 491
Shanbrom, E.: vide Shepherd, L. P.
Shepherd, L. P.; Feingold, Elaine and Shanbrom, E.:
An Unusual Occurrence of Anti-Xg^a 157
Šmálik, S.: vide Beranová, Gerda
Smith, D. S.; Howell, P. and Riches, R.:
Another Example of an Albumin Auto-Agglutinin 505
Society Transactions
Recent Advances in Immunopathology and Blood Transfusion. Conference in Commemoration of the 25th Anniversary of the Central Laboratory of the Netherlands Red Cross Blood Transfusion Service, Amsterdam, May 29–31, 1968 241
Stiefel, F. H.: vide German, J. L.
Taliano, V.: vide Pretty, H. M.
Thompson, T. E.: vide Gold, E. R.
Tippett, Patricia: vide Schneider, W.
Tönder, O.: vide Larsen, B.
Uhlenbruck, G.: Possible Genetical Pathways in the MNSsUu System 200
Volk, V. K.: vide Sgouris, J. T.
Vyas, G. N. and Fudenberg, H. H.:
Evolutionary Dissociation of γG2 and Gm(n) Antigens 233
Walker, M. E.: vide German, J. L.
Wallis, Lila A.: vide Luthringer, D. G.
Warezak, Wanda: vide Cohen, Flossie
Zuelzer, W. W.: vide Cohen, Flossie

Varia 240
Index rerum ad vol. 16 518
Index nominum ad vol. 16 520

Index rerum ad vol. 16

ABH human blood group substances
– interrelationship in immuno-fluorescence 105
ABO human blood grouping system
– Bh variant 449
Agglutination inhibition test
– simultaneous test 57
Ag lipoprotein antigen
– inheritance 146
A_1 human blood group antibody
– mollusc Bithynia tentaculata extract 503
– mollusc Pomatias elegans 503
Albumin agglutination phenomenon
– IgM autoantibody 505
– mechanism 465
Albumin antibody
– albumin agglutination phenomenon 465
Anodonta cygnea
see swan mussel
Antigen
– autoimmunity 304
Anti-antibody
– simultaneous agglutination test 57
Antigen-antibody complex
– autoimmunity 345
Anti-immunoglobulin consumption test
– leucocyte, malignant disease 183
– platelet, malignant disease 183
Antihaemophilic factor
– cryoprecipitation 1
– plasma 382
– plasma fractions 382
Antibody production
– autoimmunity 341
– clinical selection theory 256
Anti Rh(D) immunoglobulin
– production 418
– volunteer experiments 421
Autoimmune hemolytic anemia
– absence complement binding antibody 18
– hemoglobinemia 18
– hemaglobinuria 18
– IgG anti i cold agglutinin 10
– infections mononucleasis 10
Autoimmunity
– antibody production 341
– antigen alteration 304
– antigen-antibody complex 345
– bacterial antigen 314
– delayed type hypersensitivity 338
– F_1 wasting disease 325
– review 286
– virus 318

Bacterial antigen
– autoimmunity 314
Blood transfusion
– new perspectives 247
Bombay Le(a-b-) human blood type
– example 179
Burns
– pemphigus-like antibody 73

Chromosome
– MN locus, autoradiography 130
Clinical selection theory
– discussion 256
Cold agglutinin
– anti-HD 76
– IgG anti i 10
– infections mononucleosis 10
Cryoprecipitation
– preparation AHF 1

Delayed type hypersensitivity
– autoimmunity 338
Diphtheria immune globulin
– preparation from outdated blood 491

Erythrocyte glycolipid antibody
– adult cells 478
– fetal cells 478
Erythrocyte preservation
– functional properties 361

Factor IX, II, X, VII concentrate
– clinical use 398
– preparation 398
Fibrinogen preparations
– clinical effect 412
– indication 412
Fluorescent antibody technique
– ABH blood group substances 105
F_1 wasting disease
– autoimmunity 325
– malignancy 325

Gc1C
– second mother-child combination 510
Gc Norway
see Gc1C
Genetics
– human blood groups 252
Glutathione
– workshop 440
Gm(n) antigen
– evolutionary dissociation from γG2 233
Graft versus host reaction
– Wiskott-Aldrich syndrome 172

HeLa cell
– agglutination by snail extracts 119
Hemagglutinin
– concentration procedure 237
– swan mussel extract 457
– water snail 500
Hemoglobinemia
– absence complement binding antibody 18
Hemoglobinuria
– absence complement binding antibody 18
Hemolysis
– snail extracts 119
Hemolytic disease newborn
– anti Rh 14, 231
– anti Rh(D) saline agglutinating antibody 32
– Rh phenotype 195
Histocompatibility antigen
– human 263
Human blood groups
– genetics 252
Hypofibrinogenaemia
– fibrinogen administration 412

I human blood group antibody
– non-human sera 161
Infections mononucleosis
– IgG anti i cold agglutinin 10
Immunodiffusion test
– Rh antibodies 470
– Rh antigens 470
Immunogenetics
– recent applications 252
Immunoglobulin
– pathology 279
– structure 279
Immunoglobulin γG2 antigen
– evolutionary dissociation from Gm(n) 233
Immunoglobulin antisera
– absence serum proteins 69
Immunoglobulin G
– anti i cold agglutinin 10
Immunoglobulin synthesis 279

Kell human blood group system
– UIa antigen 496

Le (a-b-) Bombay human blood type
– example 179
Le(b) human blood group antibody
– absorption studies 124
– affinity H antigen 124
Leucocyte
– anti-immunoglobulin consumption test 179
Leucocyte allo-antibody
– first pregnancy 97
see also lymphocytotoxic allo-antibody
Lymphocytotoxic allo-antibody
– first pregnancy 97

Malignancy
– anti-immunoglobulin consumption test 179
– F_1 wasting disease 325
Matuhasi-Ogata phenomenon
– further observations 47
Mixed lymphocyte culture
– reproducibility 81
– unrelated human subjects 81
MN human blood group locus
– chromosome autoradiography 130
MNSsUu human blood group system
– possible genetical pathways 200
Mollusc Bithynia tentaculata
– A_1 red cell antibody 503
Mollusc Pomatias elegans
– A_1 red cell antibody 503

NZB mices
– virus 318

Organ transplantation
– tissue typing 263

Paternity exclusion
– erythrocyte phosphoglucomutase 211
Pemphigus-like antibody
– skin burn 73
Phosphoglucomutase
– disputed paternity 211
6 Phosphogluconic dehydrogenase polymorphism
– pig 514
Pk human blood group antigen
– german family 67
Plasma
– antihaemophilic factor 382
Plasma production
– partly deplasmatised blood 228
Platelet
– anti immunoglobulin consumption test 179
Platelet preservation 373
Platelet transfusion 373
PPSB
see factor IX, II, X, VII concentrate

Radial single diffusion technique
– antigen quantitation 486
– sensitivity enhancement 486
Rh human blood group antibody
– immunodiffusion test 470

Rh 14 human blood group antibody
– hemolytic disease newborn 231
Rh(D) human blood group antibody
– relation to other immune responses 222
– saline 32
Rh(D) human blood group antigen
see also Rh 14, 237
Rh human blood group antigen
– immunodiffusion test 470
Rh immunization prophylaxis
– production anti D 418
– volunteer experiments 421

s Human blood group antibody
– production in rabbit 155
Snail extracts
– HeLa cell agglutination 119
– hemolysis 119
– reverse passive agglutination test 63
– serological difference related species 63, 119
Swan mussel
– hemagglutinin 457

Tissue typing
– organ transplantation 263
Transplantation antigen
see histocompatibility antigen

Ula human blood group antigen
– kell complex locus 496

Virus
– autoimmunity 318
– NZB mices 318

Water snail
– hemagglutinin 500
Wiskott-Aldrich syndrome
– graft versus host reaction 172

Xg (a) human blood group antibody
– unusual occurrence 157

Index nominum ad vol. 16

Ablin, R. J., 73
Adebahr, Margot E., 47
Allen, F. H., Jr., 47, 130, 155
Angela, Frances, 491

Baribeau, G., 179
Beranová, Gerda, 449
Beutner, E. H., 73
Borst-Eilers, E., 222
Breekveldt-Kielich, J. C., 486
Bucher, U., 228

Capra, J. D., 10
Chalmers, D. G., 183
Cohen, Flossie, 105
Cook, S., 10
Culley, G. A., 183
Curtain, C. C., 161

Dahr, P., 510
Degnan, T. J., 47
Douglas, S. D., 172
Dowling, P., 10
Dudok, C. de Wit, 222

Elves, M. W., 81
Engelfriet, C. P., 97

Feingold, Elaine, 157
Fiset, Denise, 179
Fudenberg, H. H., 57, 172, 233
Furuhjelm, U., 496

Gavin, June, 496
German, J. L., 130
Giblett, Eloise R., 514
Gold, E. R., 57, 63, 119
Golde, D. W., 465
Gooch, Ann, 67
Gottshall, R. Y., 491
Graffenried, B. v., 228
Guévin, R., 179
Gundersen, Sidsel K., 237

Hakomori, Sen-itiroh, 478
Hirschfeld, J., 146
Holland, P. V., 465
Hopkins, D. F., 32, 195
Howell, P., 505
Hrubiško, M., 449

Issitt, P. D., 47

Jackson, Valerie A., 47
Jenkins, D. E., Jr., 18

Kano, K., 73
Knowlin, R. J., 47
Kornstad, L., 124
Kummer, H., 228
Kunkel, H. G., 10

Larsen, B., 69
Lee-Potter, J. P., 500
Lowes, B. C. R., 231
Loza, Ulana, 470
Luthringer, D. G., 18

Masure, R., 1
McGinnis, M. H., 465
Milgrom, F., 73, 470
Monn, E., 211
Mühlenen, A. v., 228

Nevanlinna, H. R., 496
Nurkka, Riitta, 496

Overweg, J., 97

Pemberton, R. T., 457, 503
Portwood, Lucile, 491
Pretty, H. M., 179
Prodanov, P., 449
Puno, C. S., 155

Rapaport, F. T., 73
Reihart, Judith K., 47
Riches, R., 505
Rittner, Ch., 146, 510
Roelcke, D., 76
Roggen, G., 228
Rümke, Ph., 486

Saison, Ruth, 515
Sanger, Ruth, 496
Schneider, W., 67
Sgouris, J. T., 491
Shanbrom, E., 157
Shepherd, L. P., 157
Šmálik, S., 449
Smith, D. S., 505
Stiefel, F. H., 130

Taliano, V., 179
Thompson, T. E., 63, 119
Tippett, Patricia, 67
Tönder, O., 69

Uhlenbruck, G., 200

Volk, V. K., 491
Vyas, G. N., 233

Walker, M. E., 130
Wallis, Lila A., 18
Warezak, Wanda, 105

Zuelzer, W. W., 105

VOX SANGUINIS

Journal of Blood Transfusion, Immunohaematology and Immunopathology

ADVISORY BOARD

P. H. Andresen, Copenhagen (Denmark)
W. Dameshek, New York, N.Y. (USA)
L. K. Diamond, San Francisco, Calif. (USA)
S. T. Gibson, Washington, D. C. (USA)
T. J. Greenwalt, Washington, D.C. (USA)
Ph. Levine, Raritan, N.J. (USA)
W. d'A. Maycock, London (Gr. Britain)
G. W. Miller, Toronto (Canada)
P. Moreau, Liège (Belgium)
T. Ogata, Tokyo (Japan)
M. Shapiro, Johannesburg (South Africa)
R. J. Walsh, Sydney (Australia)

representing the International Society of Blood Transfusion: J. P. Soulier, Paris
representing the League of Red Cross Societies: Z. S. Hantchef, Geneva

CONTRIBUTING EDITORS

H. D. Anderson, Lansing, Mich. (USA)
R. Bütler, Bern (Switzerland)
H. Chaplin, St. Louis, Mo. (USA)
B. Chown, Winnipeg, Man. (Canada)
R. R. A. Coombs, Cambridge (Gr. Britain)
Marie Cutbush Crookston, Toronto, Ont. (Canada)
J. Dausset, Paris (France)
A. Eyquem, Paris (France)
E. Freiesleben, Copenhagen (Denmark)
H. Fudenberg, San Francisco, Calif. (USA)
K. L. G. Goldsmith, London (Gr. Britain)
M. Harboe, Oslo (Norway)
C. F. Högman, Uppsala (Sweden)
J. R. Krevans, Baltimore, Md. (USA)
H. W Krijnen, Amsterdam (Netherlands)
H. G. Kunkel, New York, N.Y. (USA)
P. Lalezari, New York, N.Y. (USA)
S. D. Lawler, London (Gr. Britain)
S. P. Masouredis, Milwaukee, Wis. (USA)
M. Metaxas, Zürich (Switzerland)
F. Milgrom . Buffalo, N.Y. (USA)
J. F. Mohn, Buffalo, N.Y. (USA)
P. L. Mollison, London (Gr. Britain)
A. E. Mourant, London (Gr. Britain)
E. Neter, Buffalo, N.Y. (USA)
H. Nitschmann, Bern (Switzerland)
R. R. Race, London (Gr. Britain)
I. M. Roitt, London (Gr. Britain)
J. J. van Rood, Leyden (Netherlands)
C. Ropartz, Rouen (France)
R. E. Rosenfield, New York, N.Y. (USA)
H. Schubothe, Freiburg i. Br. (Germany)
A. G. Steinberg, Cleveland, Ohio (USA)
F. Stratton, Manchester (Gr. Britain)
S. N. Swisher, East Lansing, Mich. (USA)
G. H. Tovey, Bristol (Gr. Britain)
Z. Trnka, Geneva (Switzerland)
J. L. Tullis, Boston, Mass. (USA)
G. Uhlenbruck, Köln-Lindenthal (Germany)
R. L. Walford, Los Angeles, Calif. (USA)

EDITORS OF BRIEF REPORTS

North and South America:
E. Giblett, Seattle, Wash. (USA)

Europe:
A. Hässig, Bern (Switzerland)

EDITORS-IN-CHIEF

North and South America:
F. H. Allen, New York, N.Y. (USA)

Europe:
L. Holländer, Basel (Switzerland)

CHAIRMAN

J. J. van Loghem, Amsterdam (The Netherlands)

1969 (19th Year)

Vol. 17 (New Series)

BASEL (Switzerland) S. KARGER NEW YORK

Official Journal of the International Society of Blood Transfusion

S. Karger AG, Arnold-Böcklin-Strasse 25, 4000 Basel 11 (Switzerland)

All rights, including that of translation into other languages, reserved.
Photomechanic reproduction (photocopy, microcopy) of this volume or parts thereof
without special permission of the publishers is prohibited.

©

Copyright 1969 by S. Karger AG, Basel
Printed inSwitzerland by Buchdruckerei Friedrich Reinhardt AG, Basel

INDEX

Åkerblom, O.: vide Elgeklint, Gunilla

Allen, F. H., Jr.: vide Simpson, J. L.

Alper, C. A. and Johnson, A. M.:
Immunofixation Electrophoresis: A Technique for the Study of Protein Polymorphism 445

Ambrus, J. L.: vide Odake, K.

Anderson, Catherine:
vide Dichupa, Paz J.

Art, G. P. and Finlayson, J. S.:
Stability if Immune Serum Globulin During Storage: Effects of Prior Heating 419

Bird, G. W. G.: Blood Group Antibody Notation 468

Bishop, C.: vide Odake, K.

Blackwell, B.-N.: vide Blackwell, R. Q.

Blackwell, R. Q.: Blackwell, B.-N.; Yen, Ling and Lee, Hang-Fang:
Low Incidence of Erythrocyte G-6-P D Deficiency in Aborigines of Taiwan 310

Blue, A. M.: vide Izatt, Marian M.

Börner, P.; Deicher, H.; Hoppe, H. H.; Pixberg, H. U. and Sieg, W.:
Clearance of Rh-Positive Foetal Erythrocytes from the Blood of Rh-Negative Adults by Intravenously Applicable Immunoglobulin G anti-D 362

Bowley, C. C.: vide Voak, D.

Brunner, E.: vide Bütler, R.

Bütler, R. and Brunner, E.:
Further Observations on Human Anti-LDL Antibodies: Serological Behaviour, Frequency and Mode of Formation. 230

Bütler, R. and Brunner, E.:
Inability of Ag/Anti-Ag Complexes to Fix Complement and its Significance 462

Burtin, P.: vide Rivat, Liliane

Buzzonetti, Anna: vide Liotta, I.

Camp, F. R., Jr.: vide Litwin, S. D.

Chown, B.: vide Dichupa, Paz J.

Chown, B.: vide Lewis, Marion

Darnborough, J.; Dunsford, I. and Wallace, Josephine A.:
The En^a Antigen and Antibody. A Genetical Modification of Human Red Cells Affecting their Blood Grouping Reactions 241

Davis, W. C.: vide Guttman, P. H.

Dawson, Anne: Antigenic Markers on Cultured Human Cells. III. The MN Antigens 393

Deicher, H.: vide Börner, P.

Dichupa, Paz J.; Anderson, Catherine and Chown, B.:
A Further Search for Hypothetic K^p of the Kell-System 1

Dinklage, H.; Schahmirzadi, H.; Hradecký, J. and Hojný, J.:
E^{edghj} (= E^9), A New Allele in the E Blood-Group System of the Pig 129

DINKLAGE, H. and MAJOR, F.:
New Factors and Alleles in the M Blood-Group System of the Pig . 316
DOUGLAS, R.: vide PINDER, L. B.
DUNSFORD, I.: vide DARNBOROUGH, J.
ELGEKLINT, GUNILLA; HÖGMAN, C. F.; ÅKERBLOM, O. and ÖBERG, L.:
A Simple Method for Freezing of Lymphocytes with Retained Viability 453
FAGERHOL, M. K. and JACOBSEN, J. H.:
Heterogeneity of the Human Haptoglobin 1–1 Molecule by Electrophoresis of Serum in Starch Gels at pH 4.9 143
FIMMEL, P. J.: Antibody/Latex Erythrocyte Label. A New Method for the Detection and Counting of Minor Red Cell Populations. 146
FINLAYSON, J. S.: vide ART, G. P.
FINN, R.: vide WOODROW, J. C.
FUDENBERG, H. H.: vide GUTTMAN, P. H.
FURUHJELM, U.; MYLLYLÄ, G.; NEVANLINNA, H. R.; NORDLING, S.; PIRKOLA, ANNA; GAVIN, JUNE; GOOCH, ANN; SANGER, RUTH and TIPPETT, PATRICIA:
The Red Cell Phenotype En(a–) and Anti-En^a: Serological and Physicochemical Aspects 256
GAVIN, JUNE: vide FURUHJELM, U.
GAVIN, JUNE: vide NORDLING, S.
GERMAN, J.: vide SIMPSON, J. L.
GIULIANI, ELENA: vide LIOTTA, I.
GOOCH, ANN: vide FURUHJELM, U.
GUNSON, H. H.: A Serum Agglutinin Inhibited by Ionized Calcium 514
GUTTMAN, P. H.; DAVIS, W. C.; FUDENBERG, H. H. and MERIGAN, T. C.:
Effect of Interferon on the Course of Spontaneous and Radiation-Induced Renal Lesions in the RF/Un Mouse 279
HATHEWAY, C. L.; WESELI, D. F.; LUDWICK, T. M. and HINES, H. C.:
Separation and Differential Enzymic Inactivation of the F and V Isoantigens of the Bovine Erythrocyte 204
HINES, H. C.: vide HATHEWAY, C. L.
HÖGMAN, C. F.: vide ELGEKLINT, GUNILLA
HOJNÝ, J.: vide DINKLAGE, H.
HOPPE, H. H.: vide BÖRNER, P.
HRADECKÝ, J.: vide DINKLAGE, H.
IZATT, MARIAN M.; BLUE, A. M.; MUIR, W.; SHERIDAN, R. M. and MORRISON, C. J.:
The Rapid Papainisation of Red Cells for the Detection of Rh Antibodies 157
JACOBSEN, J. H.: vide FAGERHOL, M. K.
JOHNSON, A. M.: vide ALPER, C. A.
KAITA, H.: vide LEWIS, MARION
KARITZKY, D.: vide RIVAT, LILIANE
KISSMEYER-NIELSEN, F.:
vide THORSBY, E.
KORNSTAD, L.: vide PINDER, L. B.
KREVANS, J. R.: vide WOODROW, J. C.

LEDDY, J. P.: Reactivity of Human Gamma G Erythrocyte Autoantibodies with Fetal, Autologous and Maternal Red Cells 525
LEE, HANG-FANG: vide BLACKWELL, R. O.
LEWIS, MARION; KAITA, H. and CHOWN, B.: The Inheritance of the Kell Blood Groups in a Caucasian Population Sample 221
LIOTTA, I.; QUINTILIANI, M.; QUINTILIANI, LUCIA; BUZZONETTI, ANNA and GIULIANI, ELENA: Blood Group Activity A in Phenol Extracts from A_1 Human Erythrocyte Stroma 11
LITWIN, S. D. and CAMP, F. R., Jr.: Automated Detection of Gm Factors of Human γG Globulin. . . . 194
LODGE, T. W.: vide VOAK, D.
LUDWICK, T. M.: vide HATHEWAY, C. L.
LUNDSGAARD-HANSEN, P.: Treatment of Shock with Dextrans and Gelatins. Effects and Side Effects 161
MAJOR, F.: vide DINKLAGE, H.
MARSH, W. L. and NICHOLS, MARGARET E.: The Effect of Bacterial T-Activating Enzymes on the Red Cell Sp_1 Antigen 217
MAYR, W. R.; PAUSCH, V. and MICKERTS, D.: Serological Findings on Quadrizygotic Quadruplets 314
MERIGAN, T. C.: vide GUTTMAN, P. H.
METAXAS, M. N.: vide NORDLING, S.
MICKERTS, D.: vide MAYR, W. R.
MICKEY, M. R.: vide MITTAL, K. K.
MINTA, J. O.: vide PAINTER, R. H.
MITTAL, K. K.; MICKEY, M. R. and TERASAKI, P. I.: Serotyping for Homotransplantation XXVIII Sib-Pair Assay for Non-HL-A Antigens 406
MORRISON, C. J.: vide IZATT, MARIAN M.
MORTON, J. A.; PICKLES, M. M. and SUTTON, L.: The Correlation of the Bg^a Blood Group with the HL-A7 Leucocyte Group: Demonstration of Antigenic Sites on Red Cells and Leucocytes 536
MUIR, W.: vide IZATT, MARIAN M.
MURRAY, SHEILAGH: Rh Antibodies in Liquor Amnii 306
MYLLYLÄ, G.: vide FURUHJELM, U.
MYLLYLÄ, G.: vide NORDLING, S.
NEVANLINNA, H. R.: vide FURUHJELM, U.
NEW, MARIA: vide SIMPSON, J. L.
NICHOLS, MARGARET E.: vide MARSH, W. L.
NORDLING, S.; SANGER, RUTH; GAVIN, JUNE; FURUHJELM, U.; MYLLYLÄ, G. and METAXAS, M. N.: M^k and M^s: Some Serological and Physicochemical Observations. . 300
NORDLING, S.: vide FURUHJELM, U.

ODAKE, K.; BISHOP, C.; WARNER, W. and AMBRUS, J. L.:
Value of Adenine, Various Nucleosides, and Ouabain in Maintenance of Integrity of Red Blood Cells Under Blood Bank Conditions . . . 375
ÖBERG, L.: vide ELGEKLINT, GUNILLA
PAINTER, R. H. and MINTA, J. O.:
Stability of Immune Serum Globulin During Storage: Effects of Modifications in the Fractionation Scheme 434
PAUSCH, V.: vide MAYR, W. R.
PICKLES, M. M.: vide MORTON, J. A.
PINDER, L. B.; STAVELEY, J. M.; DOUGLAS, R. and KORNSTAD, L.:
Pt^a – A new Private Antigen 303
PINEDA, A. A. and TASWELL, H. F.:
First Example of Ny^a Blood Group Antigen in American Population 459
PIRKOLA, ANNA: vide FURUHJELM, U.
PIXBERG, H. U.: vide BÖRNER, P.
QUINTILIANI, LUCIA: vide LIOTTA, I.
QUINTILIANI, M.: vide LIOTTA, I.
REED, C. F.: vide WHITTEMORE, N. B.
REED, J. V.: vide VOAK, D.
RIVAT, LILIANE; ROPARTZ, C.; BURTIN, P. and KARITZKY, D.:
Abnormalities in Synthesis of some Subclasses of γG in a Family with Two Cases of Ataxia Telangiectasia. 5
ROPARTZ, C.: vide RIVAT, LILIANE
SAAVE, J. J.: vide WEITKAMP, L. R.
SANGER, RUTH: vide FURUHJELM, U.
SANGER, RUTH: vide NORDLING, S.
SCHAHMIRZADI, H.: vide DINKLAGE, H.
SCHENKEL-BRUNNER, H.:
vide TUPPY, H.
SHERIDAN, R. M.: vide IZATT, MARIAN M.
SHREFFLER, D. C.: vide WEITKAMP, L. R.
SIEG, W.: vide BÖRNER, P.
SIMPSON, J. L.; ALLEN, F. H., Jr.; NEW, MARIA and GERMAN, J.:
Absence of Close Linkage Between the Locus for Xg and the Locus for Anhidrotic Ectodermal Dysplasia 465
SOCIETY TRANSACTIONS
XXIIIrd Scientific Meeting of the Blood Research Institute, Cambridge, Mass., November 25–26, 1968 19
STAVELEY, J. M.: vide PINDER, L. B.
SUTTON, L.: vide MORTON, J. A.
SVEJGAARD, A.: Complement-Fixing Platelet Iso-Antibodies. III. Quantitation of the HL-A2 Antigen on Platelets 112
SVEJGAARD, A.: Complement-Fixing Platelet Iso-Antibodies. IV. A Comparison of Human, Guinea-Pig and Rabbit Complement 224
TASWELL, H. F.: vide PINEDA, A. A.
TERASAKI, P. I.: vide MITTAL, K. K.
TIPPETT, PATRICIA: vide FURUHJELM, U.
THORSBY, E.: HL-A Antigens and Genes. I. A Study of Unrelated Norwegians . . 81

THORSBY, E.: HL-A Antigens and Genes. II. Studies of the Antigen MH (= HL-A5) of the 4 Sub-locus 93
THORSBY, E. and KISSMEYER-NIELSEN, F.: HL-A Antigens and Genes. III. Production of HL-A Typing Antisera of Desired Specificity 102
TRABOLD, N. C.: vide WHITTEMORE, N. B.
TUPPY, H. and SCHENKEL-BRUNNER, H.: Occurrence and Assay of Alpha-N-Acetylgalactosaminyl Transferase in the Gastric Mucosa of Humans Belonging to Blood-Group A . . 139
VOAK, D.; LODGE, T. W. and REED, J. V.: The Enhancement of Ulex europaeus Anti-H Activity by Human Serum 134
VOAK, D. and BOWLEY, C. C.: A Detailed Serological Study on the Prediction and Diagnosis of ABO Haemolytic Disease of the Newborn (ABO HD) 321
VOAK, D.: The Pathogenesis of ABO Haemolytic Disease of the Newborn . . 481
WALLACE, JOSEPHINE A.: vide DARNBOROUGH, J.
WARNER, W.: vide ODAKE, K.
WEED, R. I.: vide WHITTEMORE, N. B.
WEITKAMP, L. R.; SHREFFLER, D. C. and SAAVE, J. J.: Serum Albumin Variants in New Guinea Indigenes 237
WESELI, D. F.: vide HATHEWAY, C. L.
WHITTEMORE, N. B.; TRABOLD, N. C.; REED, C. F. and WEED, R. I.: Solubilized Glycoprotein from Human Erythrocyte Membranes Possessing Blood Group A, B and H Activity 289
WOODROW, J. C.; FINN, R. and KREVANS, J. R.: Rapid Clearance of RH Positive Blood During Experimental RH Immunisation 349
YEN, LING: vide BLACKWELL, R. Q.

BOOK REVIEWS 470
VARIA 80, 319, 474
NEW ITEM 477
LETTERS TO THE EDITOR 478
OBITUARY 79
INDEX RERUM AD VOL. 17 549
INDEX NOMINUM AD VOL. 17 551

Index rerum ad vol. 17

ABH human blood group antigen
– solubilized glycoprotein erythrocyte membrane, 289
ABO human blood group system
– pathogenesis haemolytic disease newborn, 481
– prediction, diagnosis, haemolytic disease newborn, 321
Adenine
– blood preservation, 375
Ag human lipoprotein antibody
– frequency, 230
– inability of complement fixation, 462
– mode of formation, 230
– serological behaviour, 230
A human blood group antigen
– alpha-N-acetylgalactosaminyl transferase, 139
A1 human blood group antigen
– A activity from stroma, 11
A human blood group substance
– A1 human erythrocyte stroma, 11
Albumin variant
– new guinea indigenes, 237
Alpha-N-acetylgalactosaminyl transferase
– gastric mucosa, blood group A, 139
Anhidrotic ectodermal dysplasia
– absence linkage Xg locus, 465
Antibody coated latex particles
– detection minor red cell population, 146
Anti Rh(D) immunoglobulin administration
– clearance Rh(D) fetal erythrocytes, 362
Ataxia telangiectasia
– Immunoglobulin G1 deficiency, 5
– Immunoglobulin G2 deficiency, 5

Bg(a) human blood group antigen
– correlation with HL-A7 leucocyte antigen, 536
Blood group antibody notation
– personal point of view, 468
Blood preservation
– adenine, 375
– nucleosides, 375
– ouabain, 375

Complement
– complement fixing platelet alloantibody, 221
Complement fixing platelet alloantibody
– complement source, 221

Dextran
– shock treatment, 161
– side effect, 161

En^a human blood group antibody, 241
– serological, physicochemical aspects, 256
En^a human blood group antigen
– modification blood grouping reaction, 241
En(a) human blood group phenotype, 256
E pig blood group system
– new E^{edghj} allele, 129
Erythrocyte membrane glycoprotein
– solubilized, ABH activity, 289
Erythrocyte warm autoantibody
– reactivity fetal cells, 525
– reactivity maternal cells, 525

F bovine blood group antigen
– differential enzymatic inactivation, 204

Gastric mucosa
– alpha-N-acetylgalactosaminyl transferase, 139
Gelatin
– side effect, 161
– shock treatment, 161
Gm factor
– automated detection, 194
G-6-P D deficiency
– low incidence Aborigines of Taiwan, 310

Haemolytic disease newborn
– ABO, pathogenesis, 481
– ABO, prediction, diagnosis, 321
Haptoglobin
– heterogeneity 1-1 molecule, 143
H human blood group agglutinin
– inhibition by ionized calcium, 514
H human blood group substance
– ulex europaeus enhancement, 134
HL-A7 human leucocyte antigen
– correlation Bg(a) blood group antigen, 536
HL-A locus
– antigens in unrelated Norwegians, 81
– HL-A5 antigen, 93
– production specific typing sera, 102
– 4 sublocus, 93
HL-A2 platelet antigen
– quantitation, 112

Immune serum globulin storage
– effect heating, 419
– modification fractionation scheme, 434
– stability, 419
Immunofixation electrophoresis
– studying protein polymorphism, 445
Immunoglobulin G1 deficiency
– Ataxia telangiectasia, 5
Immunoglobulin G2 deficiency
– Ataxia telangiectasia, 5
Interferon
– spontaneous progressive intercapillary glomerulosclerosis, 279

Kell human blood group system
– hypothetic K^p, 1
– inheritance in Caucasian population, 221

Leukocyte typing sera
– production by skin transplantation, 102
Liquor amnii
– Rh human blood group antibody, 306
Lymphocyte alloantigen
– HL-A identical siblings, 406
– non-HL-A, 406
Lymphocyte preservation
– simple freezing method, 453

Minor red cell population detection
– antibody coated latex particles, 146
MN human blood group antigens
– human tissue culture cells, 393
MN human blood group system
– Mg allele, 300
– Mk allele, 300
MNSs human blood group system
– first example Ny(a) in American population, 459
M pig blood group system
– new factors and alleles, 316

Ny(a) human blood group antigen
– first example American population, 459

Ouabain
– blood preservation, 375

Papain
– rapid method, 157
Papain
– Rh antibody detection, 157
Platelet alloantibody
– complement source comparison, 221
– HL-A2 antigen, 112
Platelet antigen
– HL-A2, 112
Progressive intercapillary glomerulosclerosis
– interferon, 279
– radiation induced, 279
Protein polymorphism
– immunofixation electrophoresis, 445
Pt(a) human blood group antigen
– private antigen, 303

Quadrizygosity
– quadruplets, 314
– serology, 314
Quadruplets
– quadrizygosity, 314
– serology, 314

Rh(D) erythrocyte clearance
– anti Rh(D) immunoglobulin, 362
– experimental immunisation, 349
Rh(D) immunisation
– rapid clearance Rh(D) blood, 349
Rh human blood group antibody
– liquor amnii, 306
– rapid papainisation, 157

Shock treatment
– dextran, 161
– gelatin, 161
Skin transplantation
– production leukocyte typing sera, 102
Sp1 human blood group antigen
– T-activating enzyme, 217

T-Activating bacterial enzyme
– Sp1 human blood group antigen, 217

Ulex europaeus
– enhancement anti-H activity, 134

V bovine blood group antigen
– differential enzymatic inactivation, 204

Xg human blood group locus
– anhidrotic ectodermal dysplasia, 465

Index nominum ad vol. 17

Åkerblom, O., 453
Allen, F. H. Jr., 465
Alper, C. A., 445
Ambrus, J. L., 375
Anderson, Catherine, 1
Art, G. P., 419

Bird, G. W. G., 468
Bishop, C., 375
Blackwell, B.-N., 310
Blackwell, R. Q., 310
Blue, A. M., 157
Börner, P., 362
Bowley, C. C., 321
Brunner, E., 230, 462
Bütler, R., 230, 462
Burtin, P., 5
Buzzonetti, Anna, 11

Camp, F. R., Jr., 194
Chown, B., 1, 221

Darnborough, J., 241
Davis, W. C., 279
Dawson, Anne, 393
Deicher, H., 362
Dichupa, Paz J., 1
Dinklage, H., 129, 316
Douglas, R., 303
Dunsford, I., 241

Elgeklint, Gunilla, 453

Fagerhol, M. K., 143
Fimmel, P. J., 146
Finlayson, J. S., 419
Finn, R., 349
Fudenberg, H. H., 279
Furuhjelm, U., 256, 300

Gavin, June, 256, 300
German, J., 465
Giuliani, Elena, 11
Gooch, Ann, 256
Gunson, H. H., 514
Guttman, P. H., 279

Hatheway, C. L., 204
Hines, H. C., 204
Högman, C. F., 453
Hojný, J., 129
Hoppe, H. H., 362
Hradecký, J., 129

Izatt, Marian M., 157

Jacobsen, J. H., 143
Johnson, A. M., 445

Kaita, H., 221
Karitzky, D., 5
Kissmeyer-Nielsen, F., 102
Kornstad, L., 303
Krevans, J. R., 349

Leddy, J. P., 525
Lee, Hang-Fang, 310
Lewis, Marion, 221
Liotta, I., 11
Litwin, S. D., 194
Lodge, T. W., 134
Ludwick, T. M., 204
Lundsgaard-Hansen, P., 161

Major, F., 316
Marsh, W. L., 217
Mayr, W. R., 314
Merigan, T. C., 279
Metaxas, M. N., 300
Mickerts, D., 314
Mickey, M. R., 406
Minta, J. O., 434
Mittal, K. K., 406
Morrison, C. J., 157
Morton, J. A., 536
Muir, W., 157
Murray, Sheilagh, 306
Myllylä, G., 256, 300

Nevanlinna, H. R., 256
New, Maria, 465
Nichols, Margaret E., 217
Nordling, S., 256, 300

Odake, K., 375
Öberg, L., 453

Painter, R. H., 434
Pausch, V., 314
Pickles, M. M., 536
Pinder, L. B., 303
Pineda, A. A., 459
Pirkola, Anna, 256
Pixberg, H. U., 362

Quintiliani, Lucia, 11
Quintiliani, M., 11

Reed, C. F., 289
Reed, J. V., 134
Rivat, Liliane, 5
Ropartz, C., 5

Saave, J. J., 237

Sanger, Ruth, 256, 300
Schahmirzadi, H., 129
Schenkel-Brunner, H., 139
Sheridan, R. M., 157
Shreffler, D. C., 237
Sieg, W., 362
Simpson, J. L., 465
Staveley, J. M., 303
Sutton, L., 536
Svejgaard, A., 112, 224

Taswell, H. F., 459
Terasaki, P. I., 406
Tippett, Patricia, 256
Thorsby, E., 81, 93, 102
Trabold, N. C., 289
Tuppy, H., 139

Voak, D., 134, 321, 481

Wallace, Josephine A., 241
Warner, W., 375
Weed, R. I., 289
Weitkamp, L. R., 237
Weseli, D. F., 204
Whittemore, N. B., 289
Woodrow, J. C., 349

Yen, Ling, 310